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THE WAY

TO BE

WELL.

BY

HORATIO GOODDAY, M.R.C.S.

"They pervert Nature's healthful rules
To loathsome sickness—worthily since they
God's image did not reverence in themselves."—MILTON.

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TO THE

RIGHT HONOURABLE

THE

EARL OF SHAFTESBURY,

ALWAYS ONE OF THE FOREMOST

TO ADVANCE THE INTELLECTUAL, MORAL,

RELIGIOUS, AND PHYSICAL CONDITION

OF THE COMMUNITY,

THIS WORK IS, BY PERMISSION, RESPECTFULLY

DEDICATED.

76, Oxford Terrace,

Hyde Park Gardens, W.

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INTRODUCTION.

To promote the health of the community has, for a long time, been the aim of the Government of this country. Undoubtedly, health and prolongation of life may become much more universal than at present amidst all classes of society. These blessings, however, can only be expected through individual attention to the requirements of the living economy, independent of what sanitary measures may be devised and carried out as the law of the land.

The requirements are—Intellectual, moral, and religious culture in relation to God, ourselves, and fellow creatures. A pure atmosphere. Protection by dress and habitation

against extremes of heat, cold, and damp. Alternate exercise and rest. Cleanliness. Diet.

It is not sufficient to attend to some of these things. None of them can be neglected with impunity. Man is so constituted that they are necessities. The rational spirit, the animal soul, and the corporeal substance, are linked together to form one common organization: the condition of the two former influence the latter, and vice versâ, that of the latter influences the former. The blood of the body is one continuous stream of vital nutriment, with one channel for its distribution. And all the nerves, whether for the conveyance of vital energy throughout the frame, of sympathetic influence from one organ to another, or, of any kind of impressions to the brain, are woven into one complex web. If any part of the physical machinery suffers, other parts become affected, and the door is thus opened to other injurious agents, which co-operate and give rise to complicated disease.

In the brief resumé of sanitary agents, which constitutes this little work, the writer, after deliberate reflection, has placed the Sabbath first. The spirit and the soul are not only the highest attributes of life, but the active agents of man's nature. The body is but the instrument of action. As the regular action of the hands and wheels of a watch depend upon the mainspring, and that of the locomotive upon steam and its appliances, so the condition and life of man's body much depend upon these inner principles.

Now, what is the condition of the spirit and soul of man? They are in a state of wreck, full of uncontrolled emotion and vicious propensities, and continually acting against the laws of God. What is the result of this? Mental anguish, corporeal suffering, organic disease, and premature, if not sudden death; and it is calculated that this suffering and mortality far exceed that which arises from malaria and all the wars in the world.

How is this to be remedied? By cultivating the divine principles which constitute the renewal of the image of God, through the agency of the Holy Spirit, in the use of the means of grace. The Sabbath was instituted by God for this purpose. Add this use of the sacred day to bodily rest, and the Sabbath must rightly stand where the writer has placed it, first in the category of sanitary agents.

Man's reason and experience, and the word of God, clearly point out his wants. Each day testifies to the superabundance of means given by the Great God to meet them; and each hour proves that if these means are rightly used, they bring the greatest amount of health and peace attainable now, and, through the mercies of redemption, more than primæval happiness in the life to come.

But, what does man do? Although on such-and-such conditions, he is intended for some high position, privilege, and perpetual enjoyment in the presence of his Creator, he com-

monly pays more attention to science or some lower objects that affords passing satisfaction than to his own eternal interests.

Anything that pertains to religion is shrunk from by many as a cause of melancholy. But, the religion of Jesus Christ is a great reality, the right and permanent antidote to that malady. And it is the grand preventive of other forms of mania, and a powerful remedial agent in their chronic form.

Growth in the religion of Jesus Christ has a happy influence upon the whole system. The trials of life are surmounted by it, and received as a means of weaning man from the creature, and directing him to the Creator. The very meaning of the word religion implies a privilege. In its original sense, religion means reunion to the object of worship, (religo, to bind again.) Hence, in its secondary meaning, it stands for worship.

The more, therefore, we advance in true knowledge and holiness, the more we shall prize and embrace the Sabbath, as a special

opportunity for spiritual growth, a special day of holy joy and gladness, and a powerful sanitary agent, as it is also a type of the repose of Heaven, a foretaste of that rest which remaineth for the people of God.

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THE SABBATH-DAY.

The Sabbath is a very important part of the providence of God. Science and experience alike prove that the sacred injunction to rest from bodily labour, and to cease from worldly pursuits, whether of pleasure or business, is designed for our physical as well as spiritual welfare.

If we spend the Sabbath in the use of means for renewing the Divine image in the human soul, the physical benefit will follow naturally, as effect follows cause. In proportion as we cultivate the moral attributes of God in Christ, viz., truth, justice, forbearance, patience, purity, and love, and so become conformed to the image of God, our minds are ennobled and strengthened, and our life here, with all its conflicts, passes on in "the peace of God which passeth all understanding," and in joyful hope of a blessed eternity. Such a happy condition of the inner man always proves a salutary stimulus to organic life, and is specially valuable as an antagonist to certain de-

pressing causes of disease, and as a support at that trying time when all other means are of no avail.

The animating effect of a holy Sabbath observance is beautifully illustrated by the Rev. Joshua Gilpin, in his book entitled "A Monument of Parental Affection to a dear and only Son." He says, "Its various exercises, whether public or private, produced an exhilarating effect upon our minds, and never failed to set us some paces nearer the object of our supreme desires. It was a kind of transfiguration-day, shedding a mild glory upon every creature, and inviting us to view the concerns of time in connection with those of eternity. Through all its happy hours we sat, as on the holy mount, looking backward with gratitude, and forward with confidence, taking sweet counsel together for the advancement of our highest interest, and scarcely considering ourselves as inhabitants of the lower world."

On the other hand, it is because God's Sabbath is dishonoured, and the Christian virtues are not cultivated, that life becomes so often a tesselated stage of strife, anger, malice, revenge, jealousy, mortified pride, remorse, despair, selfishness, drunkenness, debauchery, and other vices. And these conditions of mind produce ill effects,

from temporary disturbance of function to fixed disease and premature death. Thus,

Anger, amounting to rage, and grief or fear, causing sudden and severe mental shock, may induce sudden death, or insanity. And, even less violent emotion, when protracted, will so affect the functions of nutrition, as to rouse latent disease, or render the system more susceptible of attacks from other causes.

Feelings of malice, jealousy, and revenge; mortified pride, remorse and despair; usually so derange the whole natural economy, as to accelerate the period of existence, and not unfrequently lead to insanity, to murder, and to suicide. Experience will remind most of my readers of similar instances in connection with drunkenness, debauchery, and other vices and excesses.

Of him who does not subject himself to moral discipline, it can never be truly said that he is merely his own enemy. In some degree he is mischievous through all his social relations. By vicious habits he transmits disease to beings yet unborn; by direct or indirect robbery, he is the cause of distress and want; by his unruly tongue, his violent temper, and his selfish indifference to the feelings of others, he becomes to many an occasion of grief. And thus, not only are peace

and comfort undermined, but often, life more precious probably than his own is shortened.

Whence is it but from neglect of the fundamental principles of Christianity, that from age to age thousands and thousands of human lives are sacrificed in the struggles of war? that kingdoms fall, and nations become extinct? And is it not to vindicate the justice and holiness of God that such horrors are permitted, involving as they ever do the innocent with the guilty? And again, pestilence and famine—are not these the vials of Divine wrath, poured on the families of mankind, because the Divine laws are set at naught.

AS A WEEKLY REST, the Sabbath-day, in addition to the ordinary intervals of relaxation and the nightly repose, is necessary to restore what the previous six days' toil has exhausted of the physical and mental energies. This rule applies to all who live by labour of mind or body; and they are comparatively but very few, who are not included in this category. There are, indeed, those who for a while seem with impunity to transgress this law of nature, because they are gifted with more than the average vigour of mind and body; but eventually they are sufferers for their presumption. And there are many who imperil both body and soul through ignorance of the object of this merciful institution. There are

many more too, whose consciences, though reminding them of their duty to God, habitually toil through each returning Sabbath for the meat which perisheth, having no faith in the promise that follows the injunction, "Seek ye first the kingdom of God and his righteousness, and all these things shall be added unto you." But if sin and suffering lie at their doors, what must be said of their selfish employers, who take their own rest, and often are scrupulous observers of religious ordinances?

In pointing out the bane of Sabbath-breaking to the bodies and souls of men, it is needful that we should thus specify some of the sources of the practice, and to those just named it would seem well to add that of Sunday excursions. In excuse, it is stated that the working-classes require to be carried away from smoke and other impurities, into fresh air and country scenery, or to collections of the works of nature and art, for the purposes of recreation, health, and mental improvement. But, these objects are not to be attained by means that affect the benevolent design of the Sabbath.

The best Sabbath-day recreation, and the best means of improving the mind, must surely be in the Lord's own way; viz., spiritual training for right principle, present peace, and everlasting

blessedness. God's laws and precepts are not mere arbitrary enactments, but emanations of the divine love, and exactly adapted to the conditions and necessities of man. Every person, therefore, profits himself by reverencing each and all of them. King David, who had arrived at great maturity of judgment and vigour of holy affection, says: "The statutes of the Lord are right, rejoicing the heart; the commandment of the Lord is pure, enlightening the eyes. Thy righteousness is an everlasting righteousness, and thy law is the truth. Thy testimonies also *are* my delight and my counsellors. I have rejoiced in the way of thy testimonies, as much as in all riches. The law of thy mouth is better unto me than thousands of gold and silver. At midnight I will rise to give thanks unto thee because of thy righteous judgments. Thou through thy commandments hast made me wiser than mine enemies: for they are ever with me. I have more understanding than all my teachers: for thy testimonies are my meditation. I understand more than the ancients, because I keep thy precepts. How sweet are thy words unto my taste! yea, sweeter than honey to my mouth."

It is said that the inspection and study of Nature's works lead to religion. What religion? Deism? Idolatry? Works of Nature cannot reveal to man the true God, as reflected in the face of Jesus

Christ, through the teaching of the Holy Spirit. They cannot reveal to him what he is by nature and what he may become by grace. Christianity as unfolded in the inspired volume can alone communicate these mysteries. Look at Nature's works in the East: what religion there have they led to or preserved? Nature in all her beauty and luxuriance, in her majestic heights or her awful depths, declare the glory of God—his power, wisdom, and beneficence—but she gives no intimation of REDEEMING LOVE.

In reference to fresh air, there is need of it all day and all night, for the vital changes incessantly going on throughout the whole body. There is, therefore, a *primâ facie* lack of good sense in attaching so much importance to obtaining a few hours' draught of it on the Sunday, and neglecting the means of securing it always as much as possible. Would not the better way be to obtain a room or set of rooms of proper size, well ventilated and clean? and might not this be done by adding to the present rent what is expended on Sunday excursions, including the too frequent excesses that accompany them?

Moreover, the benefit from change of air by Sunday excursions is frequently counterbalanced by fatigue, because that benefit is in the salutary effect of the fresh air upon the nervous system

and blood, and through these channels upon the frame generally; and fatigue, which is exhaustion of nervous energy, diminishes the power and freedom of the heart's action, and thereby renders less active and less perfect the requisite vital changes of the blood and nutrition. This state of interrupted function makes the body more susceptible of the noxious effect of cold, damp, and atmospheric poisons.

So if we add to fatigue, money spent upon the journey (perhaps much wanted at home), unfitness for the next day's duty, disobedience to God's law, loss of spiritual privileges, the guilt incurred of using the services of others for pleasure, and practically ignoring that principle of Divine ethics which enjoins the doing unto others as we would they should do unto us; it is but a small part of the truth to say that the benefit of Sunday excursions is more than counter-balanced: rather, they stand forth as a common offence of wide-spreading injury to health, to morality, and our religious status as a nation, so that we may in sober seriousness fear that this and other growing habits of Sabbath desecration may be drawing a curse upon our country. If excursions are to do good, they must be on a secular day, instead of secular work.

The following case, although immediately

relating to the brute creation, applies also to the organic life of the human economy. The organization of man and of the higher class of animals is very similar, and the Creator's edict in regard to the rest of the Sabbath applies to both. A horse proprietor, late on the great northern road, at one time ran his cattle every day; but always finding that some were out of condition, or ill, and frequently having to buy others, he was induced to discontinue working them on the Sabbath. His subsequent experience was that they were in better condition, and that their lives were much prolonged.

Mr. Wilberforce, in a letter to a friend, says: "I can truly declare to you, that to me the institution of the Sabbath has been most valuable." And speaking of Lord Castlereagh's destroying himself in 1822, he says: "The strong impression of my mind is, that it is the effect of the non-observance of the Sunday, both as not abstracting himself from politics, and from the constant recurrence of the same reflections, and as not correcting the false view of worldly things, and bringing them down to their true diminutiveness. . . It is very curious to hear the newspapers speaking of incessant application to business, forgetting that by the weekly admission of a day of rest, which our Maker has graciously enjoined, our

faculties would be preserved from the effects of this constant strain. I am strongly impressed by the recollection of the endeavour to prevail on the lawyers to give up Sunday consultations, in which poor Romilly (who destroyed himself in 1818) would not concur. If he had suffered his mind to enjoy such occasional remissions, it is highly probable the strings would never have snapped, as they did from over-tension."

And in a letter to Christophe, King of Hayti, dated October 8, 1818, after recommending that his people should abstain from their ordinary labours on the Sabbath, he assured him that at the year's end the sum of their labour would not be found to be lessened by this abstinence. On the same subject, Mr. Wilberforce says: "I well remember that, during the war, when it was proposed to work all Sunday in one of the royal manufactories (for a continuance, not for an occasional service), it was found that the workmen who obtained Government consent to abstain from working on Sundays executed in a few months even more work than the others." And we may note, generally, that those men are the best hands, most trustworthy, most desirous of employment, and most punctual in their engagements, who reverence the Sabbath.

That eminent English judge, Sir Matthew Hale, speaking of the Sabbath, says: "God Almighty is the Lord of our time, and lends it to us; and as it is right that we should consecrate this part of that time to him, so I have found, by a strict and diligent observation, that a due observance of the duty of this day has ever had joined to it a blessing on the rest of my time; and the week that has been so begun has been blessed and prosperous to me: and, on the other hand, when I have been negligent of the duties of this day, the rest of the week has been unsuccessful and unhappy to my own secular employments; so that I could easily make an estimate of my success in my own secular employments the week following by the manner of my passing this day: and this I do not write lightly or inconsiderately, but upon a long and sound observation and experience."

Lastly. What does God Himself say by His inspired writers on this all-important subject? "Ye shall keep my sabbaths, and reverence my sanctuary: I am the Lord. If ye walk in my statutes, and keep my commandments, and do them; then I will give you rain in due season, and the land shall yield her increase, and the trees of the field shall yield their fruit. And your threshing shall reach unto the vintage, and the vintage shall

reach unto the sowing time: and ye shall eat your bread to the full, and dwell in your land safely. And I will give you peace in the land, and ye shall lie down, and none shall make you afraid: and I will rid evil beasts out of the land, neither shall the sword go through your land. But, if ye will not hearken unto me, and if ye shall despise my statutes, I will also do this unto you: I will even appoint over you terror, consumption, and the burning ague, that shall consume the eyes, and cause sorrow of heart: and ye shall sow your seed in vain, for your enemies shall eat it. And I will set my face against you, and ye shall be slain before your enemies: they that hate you shall reign over you; and ye shall flee when none pursueth you. And if ye will not yet for all this hearken unto me, then I will punish you seven times more for your sins. And I will break the pride of your power; and your strength shall be spent in vain: for your land shall not yield her increase, neither shall the trees of the land yield their fruits. And I will scatter you among the heathen, and will draw out a sword after you: and your land shall be desolate, and your cities waste."—*Levit.* xxvi.

"And it shall come to pass, if thou shalt hearken diligently unto the voice of the Lord thy God, to observe and to do all his commandments,

that the Lord thy God will set thee on high above all nations of the earth. And all these blessings shall come on thee, and overtake thee, if thou shalt hearken unto the voice of the Lord thy God: Blessed shalt thou be in the city, and blessed shalt thou be in the field. Blessed shall be thy basket and thy store. Blessed shalt thou be when thou comest in, and blessed shalt thou be when thou goest out. The Lord shall cause thine enemies that rise up against thee to be smitten before thy face: they shall come out against thee one way, and flee before thee seven ways. But it shall come to pass, if thou wilt not hearken unto the voice of the Lord thy God, to observe to do all his commandments and his statutes which I command thee this day, that all these curses shall come upon thee, and overtake thee: Cursed shalt thou be in the city, and cursed shalt thou be in the field. Cursed shall be thy basket and thy store. Cursed shalt thou be when thou comest in, and cursed shalt thou be when thou goest out. The Lord shall make the pestilence cleave unto thee, until he have consumed thee from off the land. The Lord shall smite thee with a consumption, and with a fever, and with an inflammation, and with an extreme burning, and with the sword, and with blasting, and with mildew; and they shall pursue thee until thou perish. The Lord shall

cause thee to be smitten before thine enemies: thou shalt go out one way against them, and flee seven ways before them, and shall be removed into all the kingdoms of the earth."—*Deut.* xxviii.

"If thou turn away thy foot from the Sabbath, from doing thy pleasure on my holy day; and call the Sabbath a delight, the holy of the Lord, honourable; and shalt honour him, not doing thine own ways, nor finding thine own pleasures, nor speaking thine own words: then shalt thou delight thyself in the Lord; and I will cause thee to ride upon the high places of the earth, and feed thee with the heritage of Jacob thy father; for the mouth of the Lord hath spoken it."—*Is.* lviii.

Although these promises for obedience and threatenings for disobedience were directly made to the Jews, they did not concern that nation alone, but the whole human race. At the time Jehovah revealed Himself to the Jews, the Earth was full of ignorance, idolatry, and gross wickedness; and the laws and ordinances then enjoined were necessary that He might be acknowledged as the only true God, the Creator, Upholder, and Governor of all things, and therefore the right object of worship. This Divine revelation to one people, and through them, a means of instruction and warning to mankind generally, was an act of infinite wisdom and mercy.

The following quotations intimate that it was God's design to speak to all the world through his special government over the Jews : "Also the sons of the stranger, that join themselves to the Lord, to serve him, and to love the name of the Lord, to be his servants, every one that keepeth the Sabbath from polluting it, and taketh hold of my covenant; even them will I bring to my holy mountain, and make them joyful in my house of prayer : for mine house shall be called an house of prayer for all people.—*Is.* 56. For the nation and kingdom that will not serve thee shall perish : yea, those nations shall be utterly wasted.—*Is.* 69. All the ends of the world shall remember and turn unto the Lord : and all the kindreds of the nations shall worship before thee. For the kingdom is the Lord's : and he is the governor among the nations.—*Ps.* 22. Who shall not fear thee, O Lord, and glorify thy name ? for thou only art holy : for all nations shall come and worship before thee ; for thy judgments are made manifest."—*Rev.* 15.

Nor may we regard the Sabbath as part of the Jewish Ceremonial Law. In Paradise God blessed and sanctified the Seventh day, and made it a day of sacred rest, for the commemoration of creation, for the worship and honour of Himself the great Creator, and for the advancement of

man's spiritual essence. And it was observed by the Jews before the giving of the moral law on Mount Sinai, or of those minute observances of the ceremonial law subsequently enjoined, as Exodus xvi. abundantly proves. And when God promulgated the moral law, He commenced the commandment on the observance of the Sabbath, REMEMBER the Sabbath day to keep it holy: implying its previous existence. The ceremonial law being only "a shadow of good things to come," necessarily ceased when the Messiah, to whom it pointed, had finished his mission.

In conclusion, a weekly Sabbath never has been, and we believe, never will be, abrogated. It is embodied in the moral law which the Redeemer has established in its fullest honour and authority, as the true standard of holiness and rule of duty, for all classes of society to the end of time. And it is a special day for the cultivation of the holy principles of that law in which it is embodied, principles essential to the spiritual and organic life of time, and to the spiritual bliss of eternity. It is now held, as by the early Christians, on the first instead of the seventh day of the week, in memorial of the resurrection of Jesus Christ and of the Gospel dispensation. This was of Divine sanction, and very probably of Divine origin.

THE ATMOSPHERE.

Pure atmospheric air is part of man's nourishment. It is requisite for the constant oxygenation and decarbonization of the blood, to render it fit for vital purposes. Without it, food when digested by the stomach, and carried into the circulation, is not suited to the renovation of the frame. And it is a main agent in the removal of disintegrated tissue.

Pure atmospheric air is a mixture of 21 parts of oxygen, 79 of nitrogen, a variable quantity of aqueous vapour and ozone, and a fraction of carbonic acid (amounting on an average to 4 volumes in 10,000).

Ozone is a particular and very active form of oxygen. "It is a rapid and powerful oxydizing and corroding agent, much more so than ordinary oxygen; and possesses considerable bleaching properties." It is a natural antidote to malaria, so that the one helps to prevent the excessive accumulation of the other; and where it is pre-

sent, malaria is not. "A temperature not much higher than that of boiling water destroys all its active character." A small quantity mixed with the atmosphere has a salutary influence upon animal life; except in particular cases, as a dry and irritable state of the bronchial tubes, and high febrile action. An excess of it commonly causes irritation and inflammation of the air passages; cough; quickness and oppression of breathing. When inhaled in large quantities, it is said to destroy life quickly.

The atmosphere very commonly contains other ingredients detached from surrounding objects. Some of these, as subtle organic matters and gases emanating from animal and vegetable substances in the process of decomposition, or from animal excretions, are very injurious, and sometimes most deadly. They induce—according to their peculiar kind and concentration, the duration of exposure to their influence, the constitution of the individual, the temperature, and the humidity and electrical condition of the atmosphere—obstinate and complicated catarrhs, congestion, and inflammation; intermittent, remittent, nervous, bilious, and malignant fevers; cutaneous affections; diarrhœa, dysentery, cholera, scrofula; organic disease, consumption, and dropsy.

If malaria does not bring on some decided com-

plaint within a short time, it gradually affects the blood, nervous system, spirits, temper, secretions, digestion, and nutrition; and, thus undermining the constitution, gives rise to severe attacks, upon any sudden check to the functions of the skin, errors in diet, or mental and bodily exhaustion.

It is said that malaria is more destructive to health and life than all the wars of the world. All complaints it does not directly cause, it aggravates, or leads to a fatal termination.

Bad air has not always a fœtid odour. Persons tainted by it sometimes say they do not feel well, but know not the cause; suddenly there is paralysis, or an attack of illness of some kind. The miasm may be volatile organic matters, free, or almost free, from sulphuretted and carburetted hydrogen, or other bad odours. Those attacked with small-pox, measles, scarlatina, and hooping-cough are seldom sensible of inhaling anything disagreeable at the time they become infected.

Some olfactory nerves get so accustomed to a noxious and even offensive air, that it is difficult, if not impossible, to make the parties, although never quite well, believe that such exists; and many persons use eau de Cologne, lavender water, esprit de rose, and other bouquets, to cover the

bad savour of foul air; but such a practice cannot arrest its noxious effects.

Therefore it is imperative that no decaying organic substances, animal or vegetable, nor stagnant water containing such materials, be allowed to remain in any part of the dwelling, nor within a certain distance from it; that all water-closets and house-drains be well trapped, free from rat and other holes; and in such order that no malaria can escape; that every family retire from their house whilst any cesspool or choked-up drain situated within it, is being cleared out; and that all out-of-door privies, which remain untrapped and without proper drains, be placed as far off as possible.

It is not the practice in the present day to make cesspools within the dwelling. Those still existing in the house ought to be filled up or well charged with quicklime, covered over with brick and cement, and modern drainage substituted. To fill them up with disinfecting material, instead of clearing them out, is the safer plan.

The miasm of house drains, cesspools, public sewers, and of church yards saturated with putrid human remains, is of the worst kind. Within the last few years, the public journals have recorded painful instances of sudden death from these sources.

The pestilence and consequent mortality that occurred at Croydon, six or seven years ago, owing to the house sewage remaining and putrefying in the ditches, instead of being carried away by the stream, ought to be received generally as a significant warning.

An army cannot remain long in the same encampment, even on the most arid ground, without suffering woefully, if the animal excretions be not well covered with earth, or duly carried away by some river or aqueduct.

The Registrar-General, in his quarterly return ending Michaelmas 1856, remarks that "about 6,426 English farmers die in a year, and of them many are young; 2,605 under 65 years of age." He attributes this great mortality much to the "farm-house being close to the farm-yard, on a low part of the farm, surrounded by buildings, ricks, and trees; to the refuse of the house and of all the animals being kept month after month, undergoing fermentation, and giving off noxious vapours; and to the ammoniacal liquor, that should find its way over the land, falling into the pond out of which the cattle drink." This reckoning appears not to include illnesses of wives, children, or casualties among cattle, from the same causes.

In general, a dry and somewhat elevated gra-

velly soil is the most healthy site for an ordinary dwelling; the front of which should have a southern or a western aspect. Care, however, should be taken that it does not border upon a churchyard or cemetery on a similar stratum; because, the atmosphere penetrates gravel to some depth as well as sand, and consequently decomposition and the escape of noxious gases and volatile animal matters go on rapidly; nor upon any other nuisance that contaminates the air.

Notwithstanding all that is said upon the destructive effects of malaria, the subject by no means has the general attention it ought. Pestilential heaps are still made at the very entrance of the dwelling. The drains of one house discharge their contents at the side of another. Water cisterns aud butts remain uncleaned, and become fœtid under the nursery windows. Waste fat and bones accumulate until rank and putrid; and cabbage leaves and other vegetable matter are decaying in the cellar, vault, or dustbin.

No one must think himself safe at the upper part of the house when there is neglect of cleanliness below. Emanations from house-drains, defective water-closets, privies, and heaps of dirt containing decaying substances, ascend the house, and enter every room like a determined brigand; if not in the day time, at night when the house is

closed, and the body is more susceptible of their influence.

In taking a house, it is essential to see that there is a water-trap at the lower end of the drain, in order to keep out rats and foul air from the common sewer.

It is said "that febrile disease has its permanent abode, and epidemics begin, in the back streets amongst the poor, where cleanliness, ventilation, and good air are impossibilities." Would not these "impossibilities" cease, if landlords would do their duty, and compel the tenants to do theirs? thus preventing much drunkenness, and its offspring, crime and disease. The lowering of the whole system is but the inevitable effect of malaria; and a craving for stimulants is but nature's cry for relief. Unfortunately the proper quantity and quality of stimulating drink is exceeded, and taken in the place of wholesome food, and sanitary precautions are neglected.

It is not, however, the working and lower classes only, who suffer from neglect of sanitary measures. Many in easy circumstances go from home on this account, for change of air, and, if absent long enough, get better. They then return, but soon grow languid, and again sicken. The fault perhaps is laid to the locality, instead of to the want of due precaution.

VENTILATION.

THE necessity of fresh atmospheric air has been already stated. Ventilation is the means by which it can freely circulate within and around any dwelling or place of assembly, and by which it can escape when its vital properties are exhausted or vitiated.

Emanations from the lungs and skin of the most healthy person consist of warm aqueous vapour, carbonic acid, and effete animal matter. These when accumulated, because not dispersed by a sufficient circulation of fresh air, constitute what is called a "close room," and commonly induce a sense of oppression and general uneasiness, pain, heat, throbbing, and a feeling of weight in the head, fainting, hysteria, or even epilepsy, when there is a tendency to that malady.

We find also, amongst those who daily occupy close rooms, loss of appetite, indigestion, emaciation, nervous affections, scrofula, severe colds, and consumption.

When the bed-room is too small and imperfectly ventilated (a thing most common), there is restlessness, or drowsiness sometimes bordering upon stupor, or a dull head-ache on rising; at all events, sleep that does not refresh as it ought.

The exhalations of many persons packed together where fresh air cannot enter, may soon cause direct suffocation, as in the case of the English prisoners in the Black-hole of Calcutta, and of the Irish emigrants sailing from Dublin to Liverpool a few years ago.

When emanations from the lungs, skin, and dirty clothes remain long stagnant, whether in a mansion or cottage, they give rise to fever of that character which formerly was so constantly found in prisons, ships, and charitable institutions; or cause severe attacks at cholera, or of some prevailing epidemy which otherwise might have been slight, or altogether avoided. Their effect in reality is very similar to that of miasm arising from bad drains and putrid animal substances.

The supply of fresh air to the various apartments of our dwelling ordinarily depends upon due ventilation of the hall and staircase, and upon open windows and the crevices of the doors and window-sashes. In such cases it is requisite to have a ventilator, or window that will open, in

the hall, and on the lower and upper landing. In warm weather this mode of ventilation is sufficient; but when it is cold, something different is wanted—as pure air admitted or thrown into our apartments, hall, and staircase, after being raised to a temperature of 60 to 66 degrees Fahrenheit. The best manner of doing this remains for future ingenuity.

The escape of atmospheric air which is contaminated by the exhalations of the body and the products of ordinary combustion in warming and lighting, or by any other means, is a point of the first consideration, as well as the admission of pure air into our dwellings. The one cannot go on properly without the other. To effect this escape, the ordinary chimney is not sufficient. It cannot carry off the noxious air which rises above the mantelpiece. There ought, therefore, to be some special means, as Dr. Neil Arnott's ventilating valve, placed close under the ceiling, and communicating with the chimney; or a ventilator of another kind in the ceiling; or, means of cross ventilation, the better plan.

When an apartment, dwelling, or place of assembly is warmed by a stove or fire, or illuminated by gas, candles, or lamps, ventilation is still more requisite, as every substance in a state of combustion, like man during respiration, requires

and consumes so much of the oxygen or vital principle of the air, and evolves carbonic acid—a non-supporter of animal life and combustion. Ordinary combustion also furnishes other products which are deleterious. And when the room is not sufficiently supplied with fresh air to effect the perfect combustion of the materials used in warming and lighting, it also becomes smoky.

And ventilators are specially needful where many assemble in one place, or where the rooms are small, and where many live in one house, making what is called "the most of the room."

Some persons try to prevent fresh air entering through the crevices of the door and window-sashes, for the purpose, as it is said, of avoiding "a chill and a cold." It should be borne in mind that fresh air is the agent which the great Creator has given for the production of internal heat, whilst in the act of carrying on the chemico-vital changes of the blood and tissues. And, therefore, to deny its admission is, in addition to courting evils already mentioned, to deny oneself that natural warmth which is most lasting and most valuable, and to make the skin very sensitive to every change of temperature.

Dryness and good ventilation are of more importance perhaps in the bed-room than in the

sitting-room. To change the air of the bed-room for a few minutes only, is not sufficient. Plenty of fresh air should be admitted during the day, in order to detach as much as possible the emanations of the body which adhere to the walls, bedding, and furniture, and thereby prevent the air being tainted as soon as the doors and windows are closed.

The less drapery and carpeting, therefore, we have in our bed-rooms, the better, particularly where invalids remain much in them after the regular hours of rest.

To draw the bed-curtains closely around the face is to interrupt the due supply of fresh air to the lungs. It is better not to have any, except to keep off a direct current of air from the head.

If good fresh air be requisite for the vigorous, how much more so is it for the sick and invalid! But how often has a young invalid to sleep in a corner at the side of the attendant's bed, and in a room with double or air-tight window-sashes, and where the air of other bed-chambers and of a close hall and staircase must enter!

It is calculated that each healthy adult requires, for respiration in his sitting or sleeping apartment, 800 to 1,200 cubic feet of space; and an invalid, 1,200 to 1,600. And that 15 to 20 cubic feet of fresh air should enter the room every minute, to

replace the same quantity of air deteriorated by respiration and ordinary combustion, and allowed to escape.

Complaints cannot be thoroughly cured by the greatest care and medical skill where there is overcrowding or deficient ventilation.

It is related that illness continued in a family until a pane of glass was accidentally broken, and that it then ceased, because, the window not being repaired, a plentiful supply of fresh air was admitted.

In order to have fresh air within a dwelling, even when properly constructed, it is necessary to have a free circulation of it without.

A calm atmosphere favours the accumulation and concentration of malaria, from damp ground, from decaying animal and vegetable substances, and from general want of cleanliness; and contributes to the propagation and aggravation of fever, biliary derangement, and epidemics, especially amidst a crowded population.

Wind, on the contrary, is one of the best agents to disperse and dilute malaria, and cause epidemics to subside.

Sometimes when the dwelling is on a dry percolating soil, it is rendered dark, damp, chilly, cheerless, and insalubrious, in consequence of the solar rays and their genial influence being shut

out, and a free circulation of fresh air obstructed, by walls, outbuildings, and trees, closely surrounding it. The inmates of such dwellings, if much at home, are almost sure to become the subjects of rheumatism, neuralgia, intermittent catarrhs, coughs, dyspepsia, excitability, bad spirits, or other maladies incidental to cold and damp. While the principal, if absent the greater part of the day at his town office, or agreeably occupied elsewhere, usually remains well.

Light is requisite for the renovation of the animal and vegetable, and for certain changes in the mineral, kingdom. "It is by solar light that the vegetable world appropriates to itself, as materials for nutriment and growth, the carbon of the carbonic acid of the air, and the hydrogen of water, and returns part of the oxygen of each, to maintain that atmosphere which is essential to animal life."

Most persons must observe that at the bidding of the beneficent Creator, the solar rays come forth and dissipate the morning mist, warm the earth's surface, renovate the air, and stimulate tree, herb, and seed into growth, luxuriance, beauty, strength, and usefulness; and that when the genial beams are withheld, growth, beauty, and increase are stayed. But, all do not seem to take heed to the fact that the same mighty agency

comes also to light up their threshold, and renovate the air of each chamber; to warm the frame, vitalize the blood, aid the circulation, and develope the power and energy of those in their trust; and that when a barrier is put to this part of their mission, inherent power languishes, and premature death ensues, after a variety of suffering.

Although solar warmth is a necessary agency within and without the dwelling, of course it must be regulated. Children and others are not to be stewed in the nursery, school-room, or elsewhere, by solar heat, any more than by large fires.

Those persons in particular whose food and clothing are deficient, and whose sinews are apt to be overtasked by labour, have special need of good shelter upon a salubrious site.

Does not a diabolical practice still obtain of letting lodgings to a stranger, whilst scarlet fever is in the house, or the same room that has lately been occupied by the patient, without using proper means of disinfection? It were to be wished that such offences should come under cognizance of the law; for, is it not a species of manslaughter when death occurs from such conduct?

It may be useful to remark that scarlet fever may sometimes be prevented from spreading through a family, by placing the individual first

attacked, together with his bedding, in an upper floor, without more woollen things of any kind than are requisite; by sponging the patient twice a day with dilute acetic acid; sprinkling the room with, or suspending clothes dipped in, dilute chloride of lime, or Condy's disinfecting fluid; changing the linen daily, causing a current of air to pass through the house immediately outside the door of the infected room; well ventilating the whole house, and keeping the rest of the family in the lower apartments. The recovery of the patient may be hastened by widely opening the windows of the sick chamber several times a day. The patient will not take cold, however cold the weather may be, if the face and all the body be well covered at the time. Should the eruption not fully appear on the skin, or should it suddenly go in, and the brain, lungs, bowels, or any other organ be consequently threatened or attacked, the prompt external use of somewhat strong acetie acid, or of mustard, will usually bring it out, and give immediate relief. When there is much irritation of skin, a little sweet oil will commonly allay it; but, if it does not, use it with a little laudanum. The use of the acetic acid or mustard as a counter-irritant, and of the oil to soothe, applies also to measles.

All linen waiting in the ordinary way for the

laundress ought to be put where fresh air can get to it. And the linen of every person having a contagious complaint should be dipped into cold water containing a little chloride of zinc or other disinfecting fluid, as soon as changed. Clothes will communicate infection as much as, and for a much longer time than, the person, unless means are taken to disinfect them. If the nature of the outer clothing will not admit of the use of chemical disinfectants, steam or dry heat of a high temperature will answer the purpose.

Everything and every surface of a room, lately occupied by a scarlet-fever patient, ought to be thoroughly cleansed and purified before that room is occupied by another party. What cannot be thoroughly disinfected, must, for safety, be destroyed. The same thing applies to smallpox and any malignant fever.

The Commissioners appointed to inquire into the warming and ventilation of dwellings recommend—"1. The use of reflecting surfaces, to direct an increased amount of radiated heat into rooms; 2, that the chimney-flue be of small dimension, not more than nine inches in diameter at the widest part; 3, that the flue be provided

with a closing apparatus; 4, that it be not built in outer walls, so as to become chilled; 5, that the aperture for the escape of the smoke be placed at the back of the fire, so as to increase the intensity of combustion, and promote the radiation of heat; 6, that the fire-brick linings to grates should be in general use; 7, that sunken ashpits and hidden ashpans be employed, to prevent the diffusion of dust; 8, that the fire be not on a level with the floor; 9, that as a rule, the fire-grate is best placed which is seen from the greatest number of points in the room; 10, that a good frontage of fire be exposed; 11, that those stoves be used which prevent the formation of smoke; and 12, that the fire-grate should be studied in its construction, with the view to its effecting a better and more economical consumption of fuel, and a more equal distribution of heat."

TEMPERATURE AND HUMIDITY.

THE internal temperature of the human economy, in health, naturally ranges from 98° to 100° of Fahrenheit. To keep the inner machinery in due activity, this degree of warmth is necessary. Externally, however, it is not so high, nor so uniform. The extremities are usually several degrees lower than some parts of the trunk.

Although the natural heat of the body is about 100° Fahrenheit, an atmosphere ranging between 58° and 66° is that which is most conducive to the general health, because, in conjunction with suitable clothing, it promotes the capillary circulation of the skin, and the insensible perspiration, and permits the gradual escape of surplus heat, while it allows combustion and the vital changes of the blood to go on with sufficient rapidity and completeness. It is of great importance to bear this in mind when regulating the temperature of an occupied room or dwelling.

A hot and dry air, even if not many degrees above 66° of Fahrenheit, and so much below the

temperature of the blood, causes over-excitement of the nervous and arterial systems, followed by proportionate exhaustion; and does not allow the requisite changes of the blood to go on so perfectly as the cooler range of 58° to 66°; and if a high temperature be kept up a long time, it gives rise to diarrhœa, dysentery, biliary disorder, and fever of a high or inflammatory character.

Sufficient warmth should always be promoted by clothing, exercise, and diet, in preference to raising the heat of the room above 66°.

A warm, soft, and comparatively dry air is generally required for a feeble circulation and respiration; cases of debility, with internal congestion, tender and irritable bowels, and a damp skin; atonic gout, atonic rheumatism; and cough with free expectoration and debility.

A warm, soft, and humid atmosphere, in a southern and western aspect, is best for a dry and irritable state of the air passages, with cough, difficult and scanty, or no expectoration. It is imperative if such malady be or threaten to be chronic. It is also most suitable, where there is an habitual dry skin, a sanguine or irritable temperament, an over-active circulation, sanguineous plethora, and at the commencement of all febrile and internal inflammatory attacks.

A warm, soft, and humid atmosphere is pecu-

liarly suited to children labouring under irritation of the brain, crowing inspiration in its first stages, and febrile and inflammatory attacks generally. The relief that it affords in such cases at an early period is sometimes like magic; and it is always one of the best, and often the only means of avoiding premature death, or impaired faculties, from over-action.

A very damp and warm air, as a rule, impedes the evaporation of the pulmonary and cutaneous exhalations, and the due escape of surplus heat. It therefore prevents the vital changes of the blood being perfectly and actively carried on, relaxes all the tissues of the body, depresses the general energy, and predisposes to severe colds, diarrhœa, biliary derangement, and low fever.

Be it also remembered, that, as on the one hand, warmth combined with moisture is the great agent by which vegetable life expands into its varied and attractive beauty, so on the other, it is the means by which dead vegetable and organic substances run into decomposition and putrefaction, the injurious effects of which have already been stated.

A moist atmosphere is also a medium for retaining the gases and volatile organic matters of decomposition and putrefaction, and this is the reason why emanations from drains, cesspools, and

putrid substances are more perceptible and offensive before rain; also, why cholera and epidemics are more generally found in, and adhere to, the course of rivers, and to dirty, crowded, and ill-ventilated districts.

In summer, the early morning and evening mist, over woods, park and meadow land, interspersed with ditches, ponds, and rivers, causes sore throat, cough, erratic pains, disturbance of the stomach and bowels, and fever, as much probably owing to its holding malaria, as to its chilling effect.

A moderately cool dry air proves a good temporary tonic to many persons who have no inflammatory tendency, nor a condition of body specially requiring a higher temperature and a free action of the skin. Its tonic effect is in this way:— it lessens perspiration and the simultaneous escape of vital heat, increases the activity of vital combustion and the necessary changes of the blood, and thereby sharpens the appetite, and enhances the power of digestion. It is, also, often the best means of removing mucous expectoration depending upon relaxation of the air passages. For such a remedy in such a case, however, there must be force of the general circulation, and clothing, sufficient to prevent any chill of the skin.

In the various forms of struma, sea air is of the highest importance.

A cold atmosphere, especially when connected with damp, is fraught with disease. It checks and impedes the functions of the skin, and affects all the senses, tissues, and secretions of the body. Experience proves that according to its intensity, duration of contact, the part and extent of surface under its influence, the constitution of the individual, and other co-operating causes—diminution of vitality, apoplexy, nervous affections, cramp, rheumatism, defective nutrition and secretion, inflammation, fever, congestion, organic disease, consumption, and dropsy, are induced by it.

A very frequent way of "taking cold," is, by entering a hot room, or standing over a hot fire, when the temperature, vitality, and circulation of the surface of the body, and of the first part of the air passages, are lowered by a chilling atmosphere. The direct application of dry heat to any chilled part induces reaction and irritative or inflammatory action, according to the degree of chill, the constitution, error of blood and excretion, and other accidental circumstances. The common chilblain occurs in this way, or by natural reaction before the part recovers its full activity. And as a chilblain on the extremities may often be avoided by restoring the temperature gradually,

instead of going direct to the fire, so may a catarrhal cold by taking exercise in a room the temperature of which is not above 66 degrees Fahrenheit, or by covering oneself with blankets, and taking some warm diluent drink, not intoxicating liquors.

DRESS.

THE physical design of dress ought always to be carried out, whatever alterations may be made in the outward fashion.

That design is to protect the surface of the body against the injurious effects of sudden changes and extremes of temperature, wind, and other states of the atmosphere; and to preserve such regular and moderate warmth as may be necessary to maintain the capillary circulation of the skin and the insensible perspiration.

The perspiration performs an important part in the whole process of nutrition. It aids in the regulation of the watery fluids of the body, and consequently vital heat and vascular action. And with it is eliminated a small quantity of carbonic acid, saline and effete animal matter.

If the insensible perspiration be checked suddenly, or for a long time, that which ought to pass off by the skin is eliminated by other organs; if it is not, excrementitious plethora and fever, or some affection of the head, or chest, or abdominal

viscera, will follow. Although some organs naturally act, to a certain extent, a vicarious part, they eventually suffer from over-action and continuing to perform a duty not their own.

Persons returning to this country after a long residence in a warm climate, where the water of the frame is carried off mainly by the skin, must not omit any means of securing a free and healthy action of that organ, or they will be amongst the first to suffer.

Sensible perspiration, although beneficial when induced to a limited amount by exertion or other means, must not, as a rule, be kept up by dress; because such a practice would soon cause general relaxation of tissue, exhaustion of the circulating fluids, loss of strength and energy, chilliness, and a desire for overheated rooms, and make the individual feel every change of weather.

In carrying out the design of dress, every article should be easy, not unnecessarily heavy, and sufficiently porous to admit air to the skin, and allow of the gradual escape of the cutaneous exhalations.

Flannel, or some texture of wool, is most suited to go next to the skin, both during the warm and cold weather of this country, because it is elastic, does not adhere so closely nor hold moisture like linen and calico, and permits the gradual escape

of perspiration and excess of vital heat; also, because it is of a moderately warm nature, and further promotes warmth by friction during the general movements of the body.

The great value of flannel next the skin is well known to cricketers, boatmen, mechanics, and perhaps the majority of adults. But many delicate persons, although the very subjects for it, and continuing delicate partly from want of it next the skin, unwisely resist the so wearing of it until coerced by some sharp attack or fixed disease. Such parties are without valid excuse, as any quality, thin, thick, soft, or harsh, adapted to every age, skin, and weather, is to be had.

In general, when the skin is very sensitive to the friction and irritation of flannel, there is a great tendency to irritation or inflammation of some internal organ. Therefore, is it not better to have, as a counterpoise, a little temporary annoyance without, (if it must be so called), than permanent injury within, the body?

Insufficient clothing about the extremities causes congestion and greater liability to disease internally. Many children are invalided and suddenly cut off in this way. Because one child has circulation enough for naked arms and legs, another has not.

Ladies' stays, and every support used for the

"figure," ought to be made of ventilating and pliable materials.

Stays and belts that impede the necessary escape of perspiration, render the person more susceptible of cold when removed at night.

Knitted stays of silk, wool, cotton, or wool and cotton, according to circumstances, we consider the most salutary.

Tight stays, or tight dress of any kind about the chest and abdomen, interrupts the functions of the heart, lungs, stomach, and other important vicera, and the process of nutrition and growth, causing complicated disease, consumption, and early death. Dress made to act as a ligature not only causes interrupted function, but sometimes deformity and displacement of internal organs.

Tight cravats give rise to an apoplectic state of the brain, and tight garters to varicose veins and swollen feet.

The beaver or felt hat, being a ventilator all over, is certainly much better for the protection of the brain than the silk. The frame of the latter is coated with resinous material to hold the silk, and thus made impervious to air and the exhalation of the head. Let the public look under the leather and other parts of the inner lining, and judge for themselves. A hole a little larger than a bee's eye is sometimes made through

the frame of the crown of the silk hat, and called a ventilator. Sometimes there is only a hole the size of a shilling in the lining of the crown, over a piece of cotton-net, to give the appearance of ventilation. What next?

Waterproof clothing is only allowable as a temporary protection to other clothing. And then, it should not so envelope the body as to prevent the due escape of heat and cutaneous exhalation.

CLEANLINESS.

Cleanliness is of more value than many jewels, both as relates to personal attraction and its salutary effect upon mind and body.

Every day the whole surface of the frame should be well washed with plenty of water that is fresh, clean, and free from decaying organic matter; not warm, except in particular cases, but as cool as the strength of circulation will permit. When the skin is dried, it should be briskly rubbed with a flesh-brush; or a horse-hair, woollen or other rubber. Those who put this cleansing exercise to the test, find it a luxury not easy to be given up; as it refreshes the nerves, stimulates the circulation, enlivens the spirits, rouses the energies, invigorates the whole system, and makes the skin better able to meet atmospheric changes.

Quick ablution with tepid or cold water, followed by brisk friction of the skin during the profuse perspiration of exertion of any kind, may be practised with advantage, provided the general circulation is still excited, and there is no feeling of exhaustion.

Nobody, however, should take a cold bath when much fatigued, for fear of a severe chill and its consequences--congestion, paralysis, and other evils; nor a hot nor a cold one directly after a full meal, lest coma, apoplexy, epilepsy, or some organic disturbances of the chest and abdomen supervene.

In gouty and rheumatic constitutions, and internal and inflammatory action, cold baths are objectionable; but warm, of a temperature of 98 to 100° Fahrenheit, are commonly very useful.

In affections of the heart and great feebleness of circulation, baths should not be taken without medical advice; and then if allowed, not without an attendant.

Washing the face with cold water night and morning, is a means of preserving the sight. The reaction which follows gives strength of circulation to that surface, and consequently to the eyes. Cataract is the death of the lens, or opacity of its capsule, owing to defective circulation of those parts. And some of the local means used by the most eminent oculists to arrest that complaint are embrocations, to stimulate the circulation of the forehead and temples, and thereby indirectly that of the eyes.

A skin very sensible of cold and change of temperature may be rendered much less so by

using acetic acid, or acetic acid in conjunction with a little Eau-de-Cologne or other perfumed spirit, and a few drops of glycerine or sweet oil, after the general ablution.

Keeping the teeth clean, helps to give a relish to food, and is a means of their preservation. Eau-de-Cologne or some aromatic spirit used night and morning arrests decay and pain in teeth more than any tooth-powder. It must be applied as undiluted as the gums will bear, after washing them with water. An accumulation of tartar requires a tooth-powder, such as a mixture of Armenian bole with chalk and orris-root, or plain charcoal.

Clean clothes also conduce much to health: for they, as well as the skin when neglected, become loaded with particles of matter from surrounding objects, and with materials of a putrescent nature thrown out from the blood. This collection obstructs perspiration, and is a source of fever, cutaneous, and other complaints, and the attraction and nidus of vermin.

Cleanliness is specially requisite in the sick chamber, but is often neglected, through a groundless fear of causing a chill or disturbing the invalid. The malady is, therefore, rendered more tedious and complicated.

Cleanliness of the scalp is very commonly neglected, and the result is, irritation, excessive dandriff, eruptions, thin hair, and loss of a good head of hair; if not vermin. The scalp requires ablution now and then as well as the face: it has a good effect upon the brain, spirits, and general feelings. The habit of washing the head with cold water, where there is but little hair, checks the liability to take cold; and the best guarantee at any time against cold, after washing the head, is, to wipe the hair dry, and apply some oil or pomatum. It may be well to observe that ladies' long hair should be so worn as to admit air to the scalp, in order to give tone to the hair follicles, and strength to the hair itself. When the hair is fixed close to the side of the head, so that air cannot penetrate, the roots there are weak and thin, and the scalp unhealthy.

There is much neglect of washing heads, combs, and brushes, at many schools, even where there is a high claim to respectability, to the great annoyance of parents when the boys reach home. If, at schools or elsewhere, the head were washed once a week, and pomatum, containing a little camphor and some cantharides applied afterwards, there would be very little fear, or, but few cases, of ringworm.

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EXERCISE AND REST.

By exercise, is commonly understood, the muscular exertion of walking, riding, boating, games of recreation, and ordinary occupation.

Corporeal exercise not only gives to the muscles and bone development and strength, but also health to every organ, tissue, and secretion. It gives activity to the functions of the heart, lungs, stomach, liver, and skin; sharpens the appetite, raises the temperature of the body, enhances the nervous energy, and allays morbid and excessive irritability of the mind and nervous system. It is, in fact, a main agent in the disintegration and renovation of the frame.

Thus, the necessity to corporeal labour is a blessing, especially as it gives mental employment, and if carried out with energy and in a spirit of justice, serves, under the Divine will, as a provision for the necessaries and comforts of this life.

Exertion of mind and body on the part of the wealthier members of society for the benefit of

their poorer brethren is becoming more and more general; and certainly, this is salutary both to the benefactor and those benefited. Every legitimate employment brings its reward.

The power to exert oneself much depends upon habit. A little strength properly put out brings more, just as money brings interest. It is impossible to state the benefit that accrues from due exertion, even to those who think they have not much power to move. This is often proved in those who have had losses and disappointments.

A sudden stimulus to exertion sometimes dissipates congestion and low inflammatory action. This may be exemplified in the case of a gentleman confined to his house near Guildhall with chronic gout, and unable to move without crutches; and who, on the alarm of fire on the premises, (which was really the case,) jumped up, and fled, forgetting both gout and crutches. After the surprise, the gout was found to be gone. Another case, one known to the writer, is also an interesting exemplification of this fact. One year, a gentleman had an attack of fever, with inflammatory conjestion of the bowels; and as soon as possible he went into the country for change of air. While still suffering from languor and constant tenderness of the abdomen, circumstances obliged him suddenly to return home, and, on the same day to

hurry about a foot from place to place. His haste sped so well, that he had no cause to complain of his recent malady from that time.

A dry skin is often accompanied with a degree of languor and lassitude, although no decided malady exists. Let not one so affected yield to the *vis inertia*; but if having no legitimate occupation, force himself to an active walk, or to some manual exertion, such as turning, planing wood, splitting timber by wedges and a log-beetle. As soon as the skin moistens, he finds himself another man.

An eruption on the temples, we have known to die away in a night, after an energetic walk of four miles in one hour.

"Ought I to walk before breakfast?" is a common question. The vigorous and plethoric may do so with advantage, or give an equivalent in some active employment; but the delicate and anæmic cannot, without suffering from languor, lassitude, headache, and, perhaps, being disabled throughout the day. Veins that are never well charged with blood, and less so in the morning, require replenishing, in order to stimulate the nervous energy, and meet the increased expenditure of action. All, however, if possible, ought to get out of the bed-room into fresh air before breakfast, for the sake of appetite and digestion for this first and important meal.

Exercise ought not to be neglected when the atmosphere is mild, much loaded with moisture, almost stagnant, and consequently oppressive, because such weather renders the functions of the skin and lungs, the circulation and the vital processes less active; and, therefore, the stimulus of exertion at such a time is more needful. The exercise of cutaneous ablution and friction is specially salutary in damp weather.

Strong exertion should begin by degrees, to put the muscles on their guard, and prevent rupture or other sudden distress and injury.

Singing is a salutary exercise when it is cheerful, like our national anthem, "God save the Queen," the Hallelujah Chorus, Jackson's Te Deum, and other Hymns of Praise and Thanksgiving to God. Such music gives activity to the general circulation and vital processes, and aids in the development of the chest, whilst it gives, and is an expression of joy of heart. But squeaking, screaming, and holding the breath, at the top of the voice, in an affected and sentimental manner, has an opposite effect. Such practice embarrasses the action of the lungs and heart, and is an injury to the development of the chest, throat, and voice. N.B. In singing, take care that the chest and abdomen be not dress-bound.

Muscular exertion has its limit. ALTERNATE

ACTION and REST is a law in the animal economy. Exertion too violent or too long continued exhausts the nervous energy, diminishes the elasticity and bulk of muscle, weakens the digestive apparatus, and makes the general waste to exceed nutrition, and the whole body to languish, and be very susceptible of cold and malaria. Palpitation and organic disease of the heart are common effects of over-exertion; particularly if the nervous energy is much exhausted by labour, and excitants are used in order to continue work, instead of taking rest.

As a rule, bodily exertion ought to stop short of fatigue that does not leave energy for the digestion of requisite food, and that cannot be fully overcome by proper intervals of relaxation, refreshment, and sleep.

Activity of the mind as well as of the body, within limits, essentially aids the vital functions and healthy development of the whole frame.

But exhaustion of energy of the brain by excessive mental labour is even worse than general exhaustion by excessive muscular exertion.

Recreative muscular exercise ought both to intersect and follow study and other mental labour, to the amount of two or three hours daily, particularly during childhood and youth; and not be left

until late in the day, when the nervous energy is greatly exhausted by head work.

They who, besides overtasking the brain in the day time, drive that organ to work for hours at night, when it ought to be in the embrace of recruiting Somnus, are apt to induce confusion of ideas, instead of something lucid and to the purpose. All teachers ought to bear this in mind, and not punish youth with "impositions" when their lessons are already full long.

If the reader would know more of the effects of over-working the brain, we may enumerate pain, discomfort, giddiness, and a feeling of tension or numbness in the head; pallor, indigestion, emaciation, faintness, debility, irritability, dimness of sight; congestion, irritation, inflammation, and organic disease of the brain; imbecility, mania, epilepsy, apoplexy, and paralysis. No doubt in many instances, these effects are aided by co-operating causes; as, wrong diet, malaria, anger, grief, anxiety, disappointment.

In every undertaking it is well to calculate our physical strength, and remember that when one function or set of functions draws more than the due proportion of nervous energy, there necessarily remains less than there ought to be for the rest:—for instance, muscular labour may so overdraw upon that vital agent as to leave but little

for circulation, digestion, secretion, and intellectual pursuits. Mental toil may so overdraw its share, as materially to diminish the power of circulation, digestion, secretion, and muscular exercise. An ordinary full meal commonly forbids much bodily or mental exertion, either directly before or after it, to prevent the vital energy being drawn away from the digestive process. And, eating to excess requires much more than the stomach's average proportion, which is one reason why most gourmands are indolent. In all cases, therefore, where the nervous energy is overtasked by mental or muscular labour, the remaining power must be economized, and special care taken to have food easy of digestion, at the same time refreshing and nutritious.

We have seen the good effects of exertion; INDOLENCE, therefore, is a great misfortune to mind and body. Independent of affecting our moral and intellectual position, it induces a sluggish circulation, defective secretion and excretion, loss of appetite, weak digestion, bad sleep, low spirits; cutaneous affections; flaccid, powerless and undeveloped muscles; obesity, congestion, organic disease, and dropsy.

SLEEP, "the repose of the organs of sense and

voluntary motion," is a part of rest indispensable in the process of nutrition and restoration of exhausted energy.

The young, especially the very sensitive, require a large portion of sleep, to prevent over-action and assist growth. Healthy infants naturally pass a great part of their time asleep. Sleep is literally to them "nature's soft nurse." Children up to five years of age are better for an hour's sleep at noon: and up to seven or eight years, they should go to bed in such time as will allow them twelve hours' sleep. Those above this period up to fifteen or sixteen years require ten hours; from this age to thirty, at least eight; and after thirty, from six to eight hours'. The aged, very commonly wake very early in the morning, and make up their sleep in the day time. The short sleeper, except in old age, has often the soundest sleep, and the intensity of it greatly makes up for a longer duration. Sleep, however, depends much upon habit, temperament, exertion, and exhausted energy.

If the nervous energy be not sufficiently recruited by sleep, languor and a variety of nervous or feverish symptoms follow, or are induced by slight co-operating causes. Active minds taking too little sleep, are very liable to sudden and alarming attacks of the brain.

As a rule, in order to obtain refreshing sleep, carry on some useful employment of mind and body, on a principle of duty. If no regular employment, take sufficient exercise by walking or otherwise, but not to excessive fatigue. Obtain fresh air out of doors as much as possible. Avoid heavy, indigestible, and exciting meals at a late hour. Retire to bed and rise at reasonable hours, not reversing the order of Providence by "turning night into day, and day into night." Attend strictly to cleanliness, ventilation, and temperature. If robust and plethoric, let your bed be upon an inclined-plane. If bloodless and weak, lie horizontally, with the head but very little raised. And shut out, as far as may be possible, all secular thoughts and cares, putting all your confidence in, and casting all your care on Him who careth for you.

An elastic horse-hair mattress to sleep on is more suitable than a feather-bed, when the general circulation of the blood and the production of inward heat are sufficiently rapid. A horse-hair pillow also is best in plethora and over-action of the heart and arteries.

Feather beds, by retarding the escape of animal heat quickly produced, cause excitement, restlessness, and general uneasiness, followed by excessive perspiration. And these symptoms lead to re-

laxation of the skin and other tissues, and exhaustion of nervous energy.

A feather bed is preferable to a mattress where there is emaciation, a weak circulation, and defective vital warmth, or a want of blankets, or the room is cold and damp.

Thick counterpanes are heavy and oppressive, and retain the exhalations of the body after they pass through the blankets.

Sudden interruption to sound sleep occasions sudden mental emotion and embarrassment of consciousness, and disturbs the respiration, circulation, and other important functions.

Sleeplessness is a common attendant upon an over-loaded stomach, indigestion, defective secretion, accumulations in the intestines, anæmia, over-study, or any excessive mental labour, as well as upon actual disease and mental emotion.

Habitual want of sleep, without apparent cause, should have the attention of the medical adviser, because it may be the forerunner of a serious attack of the brain or its membranes.

They who are weak and whose veins are sparely supplied with blood, and who dine at an early hour, usually require supper; but many such are afraid to take anything near bed-time, lest it should make them feverish, and prevent sleep.

They do not consider that, although sleep is needed to restore energy, a certain amount of energy is requisite to obtain sleep, and that that energy is dependent upon nutriment carried into the circulation. The robust and plethoric may be better for avoiding suppers, but it is not so with the anæmic. The nerves become so sensitive from want of due nourishment, that almost any food when taken into the stomach causes a morbid feeling somewhere.

Want of sleep from inanition and consequent exhaustion of nervous energy, may run into delirium and mania. There is abundant proof of this, in cases of hœmorrhage and exhaustion in child-birth, and in the abuse of purgatives.

Opiates are too commonly resorted to. Many children are thrown into convulsions in this way. In general, opiates are not proper in a full habit, high febrile and inflammatory action, bad or deficient secretion and excretion, and accumulations in the intestines; because in such cases they arrest secretion still more, and affect the head. They, however, are generally admissible in a relaxed state of the tissues, exhaustion, and copious secretion and excretion.

Where direct opiates ought not to be taken in order to allay pain and procure sleep, henbane,

lettuce, and conium generally may, in conjunction with other correctives.

Staying too long in bed, and excessive indulgence in drowsy sleep, not only wastes the most precious part of our days, but induces an apopletic state of the brain, and torpor of the general circulation, and impairs secretion, appetite, and digestion. In short it enfeebles and diseases mind and body.

A great authority says, that he who loses an hour in the morning, spends the rest of the day in running after it, without overtaking it. Now, all this hurry and anxiety disturbs the general circulation, the nervous energy, the various faculties of the brain, and the whole process of nutrition. The writer believes that one such day is a greater strain upon the whole economy than quiet *labour* for a month; to say nothing of the loss of credit and property through want of punctuality.

Although rest is proper after a full meal, it should not be sleep, but a wakeful rest, with cheerfulness. Sleep at this time rather retards than aids digestion.

Sleeping with the head under the bedclothes is to respire the exhalations of the body. This practice is very injurious to the blood, and, it is reported on authority, suffocates more than twenty children annually.

FOOD.

THE design of food is to provide the quantity and quality of blood which is requisite to maintain moderate vascular action, moderate tension, vital heat, the repair of disintegrated tissue, growth, and all the manifestations of life constituting health.

Vital heat is chiefly maintained by the combustion of carbon and hydrogen of certain kinds of food and disintegrated tissue, with oxygen derived from the air, forming carbonic acid and water. The food here alluded to embraces sugar, starch, gum, fat, oil, and similar compounds of carbon, hydrogen, and oxygen, without any nitrogen. These kinds of food physiologists style non-nitrogenous, and calorifacient or respiratory materials. When sufficient respiratory food is not taken, the adipose tissue is first consumed, then the other tissues, until exhaustion terminates in dissolution.

In regard to repair and growth, the adipose

tissue is derived from the fat of animal food and other non-nitrogenous materials which are not expended by combustion for the production of vital heat.

All the other tissues contain nitrogen in addition to carbon, hydrogen, and oxygen. Their repair and growth, therefore, are necessarily maintained by materials which contain those elementary constituents in the same proportions. These materials of food are called nitrogenous, and plastic. They are albumen, fibrine, caseine, gelatine, and chondrine of any kind of animal food; and albumen, gluten, and legumin of vegetable produce.

"Albumen is abundant in the juices and seeds of nearly all vegetables; the gluten which exists, especially in corn, and other seeds of grasses, as well as in their juices, is identical in composition with fibrine, and is commonly called vegetable fibrine, and the substance named legumin, which is obtained especially from peas, beans, and other seeds of leguminous plants, and from the potato, is identical with the caseine of milk."

Other constituents, compounds of phosphorus, sulphur, iron, chlorine, sodium, potassium, calcium, magnesium, fluorine, and silicon, also enter into the composition of the blood and tissues of the body. These inorganic matters are essential to life and health. They are naturally present in

both animal and vegetable food, in the requisite form and proportion, and must not be extracted or altered in the process of cooking. This is one great reason why food plainly and well-dressed is most suitable.

A combination, therefore, of nitrogenous and non-nitrogenous substances containing the natural amount and variety of inorganic principles must be our aim in the search and choice of food. Both animal and vegetable matters contain them all. The exact kind and quality, however, must depend upon age, strength, and constitution, exertion, the atmospheric condition of the locality and season, and other circumstances.

The Infant is naturally supplied with a material that contains all the ingredients necessary for respiration and heat, nutrition and growth; but as he advances in life he requires other things, because, an entire milk diet is not adapted to much bodily or mental activity.

Cow's, goat's, and ewe's milk are not so easy of digestion, nor so suitable for an infant as the mother's, because those kinds contain a harder curd, and three times the quantity of it in any given measure. They also contain less sugar, but more of the various salts. There is also more cream in ewe's, but less in cow's and goat's. Much, however, always depends upon the food and circumstances of the person and animal.

Ass's milk is nearest allied to woman's in point of curd, sugar, and the salts. This is the reason why it is light and easy of digestion, and often found to agree with infants better than other food, the mother's supply failing. Its quantity of cream, however, is very small. Sometimes this is an advantage. But very often an addition of cream from cow's milk renders it more serviceable.

Human milk being very light, ought to be taken as the best lesson in feeding infants, when their natural food fails. Very commonly infants and little children are thrown into fits and prematurely into the grave, by being crammed with too much or too heavy food. Their continual sucking or eating is no proof that they require such feeding. On the contrary, it is often a proof of distress from over distention. They take so much because it is put to them, and they know not what to do for relief. And when the assimilative process is impaired, the appetite is often increased, even to craving. This is especially the case in irritation of the brain, advancing to, and during the first stages of, crowing inspiration (*Laryngismus Stridulus*).

Although the demand for new supplies is more considerable during growth, convalescence, and much outgoing from exertion or otherwise; it

must be borne in mind, that it is not the amount taken that sustains, but that which is properly digested and assimilated.

Infants, on the other hand, are sometimes half or quite starved. Skimmed milk and water is thought good enough. In general, infants do not and cannot be expected to thrive upon such food, without the addition of some non-nitrogenous material to supply the place of the cream of new milk. Cream naturally helps to sustain combustion and vital heat, and to form the adispose tissue, which not only gives that cherubic form to the babe, but helps to preserve the vital heat when produced, and is ready for absorption as elements of respiration, in case of need from loss of appetite.

When the mother's supply for her infant fails too soon, the following mixture is a good substitute: Quarter of a pint each of new milk from the cow, milk-whey, and water, half-an-ounce of sugar of milk, and a tablespoonful of cream; or one part of cow's milk (new), two parts of water, a little sugar, and a small quantity of arrow-root or biscuit, or baked flour mixed with one-sixth of oatmeal, or bread, previously boiled in water, as near as possible, to a jelly.

The great secret in mixing amylaceous or any kind of farinaceous food so as to agree with in-

fants is, to boil it well, and give it in moderation and not too thick, with a little pure fresh milk. It is still exceedingly difficult to get genuine new milk unless had direct from the cow. It mostly has the semblance of being despoiled of some of its cream.

In commencing light puddings, animal broths, or meat with infants, it should be very gradual—as a rule, every other day.

The writer has dwelt much upon the food of very young children, in consequence of the vast mortality amongst them from inattention to it, and many of their guardians giving them of nearly everything of which they themselves partake. His other remarks on aliment will be general.

Milk with bread or some kind of farinaceous material, in the form of light pudding and otherwise, is also used as a diet for invalids and others, when the system requires support with the least amount of stimulus.

Fresh vegetables contain much water and little nutriment, but give the stomach something to do. They are, therefore, suitable in sanguineous plethora and over-action, or that tendency, as long as the digestion is good.

Farinaceous substances are supporting according to the quantity of gluten they contain, in

addition to other alimentary principles. It is the larger amount of gluten in wheat than in other cereal grains, besides a very large proportion of starch and some sugar, and gum, that renders wheaten flour pre-eminently nutritious.

Divesting flour of all bran and pollard renders it constipating, and, it is said, helps to prevent the teeth growing strong, and to cause early decay.

The most wholesome bread made, we believe, is that which consists of six parts of wheaten flour divested of a little of the bran, but none of the pollard, and one part of fine Scotch oatmeal. For an irritable state of the stomach and bowels, however, fine white bread is best.

FRESH VEGETABLES AND FARINACEOUS SUBSTANCES form the chief part of the diet of the natives of warm climates. They are so adapted, because they are less stimulating and do not raise the pulse like animal food. And they should form a large portion of the diet of this country during the hot weather. Fresh vegetables also check the disposition to fever, bilious complaints, and putrescence of the animal tissues, so common in hot places and seasons.

As a rule, farinaceous substances and fresh vegetables should form about two-thirds or three-fourths of the principal meal.

ANIMAL FOOD, especially the brown meats, raise the pulse more than vegetable substances, and, therefore, are adapted to form, as they do, a large portion of the diet in temperate and cold climates. Fresh meat, especially beef and mutton, should enter liberally into the diet of the phlegmatic temperament, and of the anæmic and asthenic, or pale, relaxed, and debilitated subject.

The white meats are not so stimulating as the brown. In this respect they are intermediate between them and farinaceous substances containing gluten. Some of them, as the common fowl, pheasant, galæna, turkey, and veal, are highly nutritive, containing about 20 per cent of fibrine, besides some albumen and gelatine. The four first of the varieties just named, and taken with bread sauce, are suited to delicate stomachs and sensitive nerves, where there is a distaste to much butcher's meat. Veal will nearly answer the same purpose as food as the feathered tribe just spoken of, if dressed and taken in the same way. Veal in hot weather is very prone to ferment and become sour, and in this state to cause diarrhœa.

Fresh pork is very nutritive. It contains about 20 per cent. of fibrine. It should, however, be taken in greater moderation than any other fresh meat, and with a large proportion of bread or

fresh vegetables. It is not suited to weak stomachs. The fat of bacon generally digests better than that of fresh pork; but the lean of bacon, ham, and other salted meats is hard and not very digestible. Scrofula is said to have derived its name from scrofa, the sus scrofa of Linnæus, on the supposition that pork was a frequent cause of that complaint.

Fish is still less stimulating and nutritive than the white meats of the feathered tribe and of quadrupeds. The fibrine is only about 14 per cent. in those kinds which are most approved in this country; viz., cod, soles, haddock, whiting, turbot, and trout. Undoubtedly there are very many kinds in the great deep, equally appreciable. The sea teems with food, if the land does not. If, therefore, Government would secure for the great bulk of the community a supply of good fish at a cheap rate, it would confer a great boon upon society, and immortalize itself.

Salads of lettuce, beet-root, and other substances, if quickly grown, tender, and properly dressed, are refreshing and salutary to most people; but they are often condemned as unwholesome, when excess or something else is the cause of disorder.

Ripe and properly dressed fruit, when taken in moderation, is refrigerant, antiseptic, and anti-

scorbutic. In general it suits better if taken with some light farinaceous material. When taken to excess between meals, or crammed upon an already full stomach, it proves a source of contamination, inducing fermentation, acidity, and indigestion.

If children and others with tender bowels have fruit, it should be the juice preserved, jelly, or something not full of indigestible seeds and skins. And, it should be taken with boiled rice, biscuit, stale bread, or such like things.

Of late years, sugar has been a considerable item in diet. As the principal alimentary substances do not contain much real saccharine matter (although by analysis gum and starch are closely allied to it), I think the taste for much sweet food very injudicious. Although sugar is a calorifacient material, and helps to form the adipose tissue, failing other substances; excess of it, in many persons, causes acidity and debility of stomach, boils, eczema, and various humours; and, possibly, diabetes. At all events, all sugar taken ought to be digested, and none of it found in the blood, as in diabetes. If once in the blood, the kidneys are the most natural and ready channels of escape. According to the late Dr. Prout, "abuse of sugar occasions the oxalic acid form of dyspepsia." In which cases there is not only

distress of stomach and emaciation, but also irritation of the bladder and adjoining channels, caused by the crystals of oxalate of lime in the urine.

Condiments are essential as antiseptics, and, as flavouring and stimulants with insipid food to provoke the saliva and other secretions of digestion.

To unnecessarily habituate oneself to hot peppers, and other pungent things, especially in youth, where the circulation is active, is to lessen and stop their cordial and beneficial effect in casualties, and in the course of natural decay, when really requisite.

Common salt, which has become a regular article of diet, serves, in the economy, very important purposes. It is an essential constituent of the blood itself; and, through decomposition, by the aid of water, furnishes soda and the acid proper to the gastric juice, if they are not taken up in sufficient quantity with the food. Taken in excess, it causes thirst and dryness of the mouth until removed by the kidneys.

Lemon juice, vinegar, and pickles, which are not hard and tough, when taken in moderation, are serviceable in the absence of fresh vegetables, and in promoting appetite and digestion after fevers of a putrid character. They are also useful

in "tempting down" proper solid food. Very often soda is taken to get rid of acidity, or uneasiness in the stomach, when a little acid is required to remove the cause.

Acids should not be taken upon an empty stomach, except prescribed by the medical attendant. Sometimes vinegar or lemon-juice is taken, and proper food refused, to diminish obesity, and obtain a "slim waste." This practice certainly will produce wasting; but it will also prove (as it has done) loss of beauty and unintentional slow suicide.

The right way to diminish obesity, is, to ascertain whether it is connected with sanguineous plethora or debility, and, if with the former, to take a low diet, and plenty of active exercise in the open air; but, if with the latter, to practise active walking or other exercise, and to live upon a diet of fresh meat plainly dressed (chiefly mutton and beef), fresh succulent vegetables, gluten or brown bread, tea or coffee, and a little wine or bitter beer; but, to avoid, as much as possible, white bread, potatoes, and all farinaceous substances, fat, oil, butter, sugar, stout, and sweet ale. The diet advised in cases of obesity with debility, is to make muscle and strength, and fit the individual for exertion. The advice to avoid such and such things, is, to prevent the deposit of more fat, and

to give the person the best chance of taking up some of his own, as elements of respiration. We must repeat here that the power of walking depends much upon the frequent effort to do so, and upon well grooming the skin afterwards. To prevent obesity, we must adopt a modification of the foregoing plan.

Slow and perfect mastication is a great point towards the enjoyment of food, temperance, and good digestion. Neglect of mastication entails a loss of saliva, and its services as an agent in the process of digestion. This, together with the unmasticated food, and the excess committed by bolting it, levies a heavy task upon the stomach, to its certain injury. In pressing hunger the food should be more masticated instead of less, because then it would sooner comfort, and sooner meet the demand for supplies.

One meal ought to be allowed to digest before another is taken; and digestion ought not to be interrupted by small quantities of anything. The stomach requires time to recruit for its regular work, as well as the brain and muscles, and should not be always kept charged. Frequent eating and drinking, even of small quantities, especially of dainties, interrupts the return of a good appetite, and must eventually prove inconvenient as well as injurious.

There should be an interval of about five or six hours between each meal, except in particular cases, as a frequent demand for supplies during growth, convalescence, considerable outgoing from exertion or disease, or where only a small quantity of food can be taken at a meal.

A full meal cannot be taken with impunity during exhaustion, whether from long abstinence, toil, or otherwise, as it requires for digestion a full share of nervous energy; nor just before much bodily or mental exertion, because such exertion is sure to draw first upon that vital agent, and leave the stomach more or less unsupplied. It is not an uncommon error, to fast from breakfast until a late dinner, and then, feeling half famished, to swallow rapidly, without due mastication, perhaps double what would be requisite at any time. Of course a train of evils follow.

Condensed food is too often taken largely, under the idea that it will quickly give strength. It is not so. It increases the labour of digestion, and fevers the frame. Even in cases where the system has been reduced by fever, and there is a good appetite for materials of repair, it is better to have ordinary nutritious things, as plain fresh meat and vegetables, bread and good beer or wine; gruel, soup, broth, plain and digestible puddings (see DRINK).

The appetite is naturally less, and moderation is specially requisite, when, from inactivity or any other cause, the outgoing is small. Therefore they who have just gone from an active to an indolent or sedentary life should lessen their diet without delay, and by no means use provocatives to eat as much as before.

A sudden change from scanty and innutritious food to plenty of good meat and other supplies, is apt to induce indolence, febrile action, biliary derangement, eruptions.

Breakfast, as a rule, should be taken before "exposure to morning dews and other noxious influences which engender ague and fever; because the system is more susceptible of infection, and of the influence of cold and other morbific causes, in the morning before eating than at any other time."

Study or other mental exertion before breakfast is objectionable when the brain and nerves are very sensitive, or the general constitution is weak; because it may exhaust the nervous energy wanted for the requirements of the day. Study should by no means be thrust upon delicate children, whose physical powers have to be developed. Epileptic fits sometimes occur in the night when the nervous energy is at its lowest point, and so they may be induced by working the brain when in a state of exhaustion before breakfast.

A large variety of food may be easily digested if all together be not in excess and the articles not very opposite in the time they take for digestion. But happier and longer-lived are those who adhere to a few good plain things.

They, who disregard heaven's design, who instead of leaving off when refreshed and when the healthy appetite is satisfied, and whilst the body remains light and elastic, go on eating and drinking to excess, perhaps of materials dished up with much art, on purpose to gratify and prolong a fictitious appetite, bring down upon themselves some disorder or disease naturally impending such indiscretion. If the excess be occasional, the embarrassment may not be merely temporary. Some malady from atmospheric or other causes may be lighted up, which with temperance might have been avoided. Or, some complaint already existing may be aggravated to a serious degree. Although from power of digestion and strength of constitution, individuals may daily eat to excess, and, for a time, appear to thrive as "jolly fine fellows," the chances are, that sanguineous plethora, over-action, obesity, indolence, congestion, defective secretion, low spirits, nervous and cutaneous affections, organic disease, loss of vital power, and Dropsy, will soon or late present themselves.

On the other hand, scanty and unwholesome

food induces poverty of blood, low action, and debility. Secretion and all the functions go on imperfectly. And disease of the eyes, bones, and joints, decline, scurvy, diarrhœa, cholera, and severity of all epidemics, result.

Many persons buy inferior meat, because of the greater quantity obtained for the same money. Two ounces of good meat is of more value as nutriment than any quantity of bad. It is the same with other kinds of food. Bad meat is characterized by being pale and flabby, shrinking, and yielding very little gravy; having a disagreeable odour, very little fat, bruises and lodgments of blood here and there; and the juices not being set by the ordinary amount of heat in a given time.

Here we venture to remind the reader of the solemn fact, that what is spent by one party in excesses, bringing upon themselves mental and bodily suffering, disease, and premature death, would, if properly applied, effectually relieve the miseries, and materially raise the spiritual and physical condition of another, their poor fellow creatures, who hardly know where to lay their heads, and scarcely have wherewith to keep the pulse going. One of the metropolitan ministers of the gospel, an eye-witness to London poverty, states that there are families, who, from their cir-

cumstances, are compelled to tenant cold, damp, dark, dirty, and offensive cellars or places; where all eat, drink, sleep, wash, dress, sicken, die, and cannot bury the dead out of their sight. That many of these are as they are, the gin palaces can sufficiently testify; but it is not so with all. Sickness may overtake and disable any of us from following our occupation. If there be no herd in the stall, nor nugget in the coffer, what then? Surely, to relieve the urgent necessities of others, instead of ruining and killing ourselves with excesses, is to be our own benefactor as well as theirs. And, is not to take care of our bodies, and, it may be said, of our souls, a duty we owe to God as well as to ourselves? Does not God lend, only lend us of his stores, in order to comfort, to uphold, and to hand on to others? If the majority of the British were to help the really necessitous, instead of injuring themselves with excesses, what a nation would be Great Britain! What union! What strength! What courage! What peace!

The object of cooking alimentary substances is to dissolve, but not lose, the gum and sugar; "rupture and partly dissolve the starch grains; slightly coagulate albuminous and fibrinous liquids; and, sometimes, to separate noxious matters; and thus to save the stomach labour in the process of digestion, as well as to meet the

taste and circumstances." Instead of attending to these points, the best supplies are often spoilt. They are burnt, rendered hard and indigestible, made distasteful, or the nutritive principles are extracted.

Food plainly dressed is always best, particularly for convalescents and temporary or chronic invalids. The latter often remain as they are, from inattention to this point in their diet.

Underdone meat is often thought to be more nutritious than that which is well done. It is not so, but it takes more time to digest.

Salting renders the lean of meat hard, and less digestible; and salt meats deteriorate by keeping.

Baked meats and pie-crusts contain empyreumatic oil, and therefore are not fit for invalids.

"Fried substances are the most indigestible, probably owing to the fatty acids being set free."

Boiled potatoes are said to be more nutritious than baked. The appetite, at all events, tires of the latter, but very seldom or never of the former.

DRINK.

Drink or liquid food is for the repair of fluid expended by the skin, lungs, kidneys, and other organs of the body. Water, mucilaginous and other mild liquids, separately or conjointly with solid food, are naturally adapted and provided for this end.

The importance of water in the animal economy is not sufficiently studied. "There is very little nourishment in this" is a very common observation when partaking of watery fluids. Nearly four-fifths of the body are water. Water is the solvent and carrier of nutriment throughout the body. Water gives the blood its volume and proper density, and enables it to permeate the minute vessels. Water aids in the elasticity and freedom of action of the various parts of the frame. The chemico-vital processes cannot do without water. And in water the disintegrated materials find their exit.

When the proportion of water proper to the blood is lessened, that inherent monitor thirst warns us to replace it, and if we do not soon attend to the warning, the healthy manifestations of life begins to fail. Loss of power, and a feeling of general distress are among the first symptoms.

The recruiting power of water is well seen in its immediate effect upon cattle, which readily go along the highways when refreshed by it, after refusing to do so for the shout, dog, and baton of the drover.

As a rule, therefore, how much better would it be for man to refresh his frame with water and mild liquids, instead of gulping down strong drink, and thus adding thirst to thirst, and rendering himself torpid or excited, and something worse than useless!

The quality of the water is very important. Water containing putrescent organic matter, like putrid food or putrid air, is very bad: it depresses the nervous energy, poisons the blood, induces fever, diarrhœa, and scrofula, and predisposes to severe attacks of any prevailing epidemic.

Water and other liquids have their limit: no more should be taken than is requisite to refresh the body after previous outgoing, and to aid the digestive organs in the solution of solid food. Yet some persons make a habit of taking two, three, and even four tumblers of cold-water or beer at dinner, and two or three large cups of tea or coffee at breakfast. Half this quantity in general is amply sufficient.

Excess of watery fluid distends the stomach and weakens its elasticity, oppresses the breathing,

induces thin blood, thin secretions, over-sensitive nerves, overaction of the skin and kidneys, and renders the body very susceptible of the effects of cold. It also stops the appetite for wholesome solid food.

In regard to drink for breakfast—good black tea or cocoa, of moderate strength, with little or no sugar, and about one-fourth part milk, constitutes a refreshing and salutary beverage. Milk-and-water or gruel-and-milk is good nutriment, and always preferable to bad tea. Coffee is not advisable in boils and some other cutaneous eruptions.

Thin liquids do not undergo digestion like solid substances. They become absorbed. And digestion is retarded until all watery fluid not required for that process is taken up.

Very hot fluids, habitually taken, injure the teeth and stomach, although as a stimulus they may afford some relief at the time.

Very cold drinks should not be taken immediately before a meal, because they lower the vital heat, vascular action, nervous energy, and muscular power of the stomach, and thereby impede the requisite effusion of gastric juice, and retard digestion.

FERMENTED LIQUORS are quite unnecessary, we ought to say, injurious where there is plenty of

wholesome food, good digestion, and a good constitution. To those of a robust habit and sanguine temperament, they are particularly baneful.

Sound beer of moderate strength, or wine-and-water, is generally a valuable help where the food is insipid and not sufficiently stimulating and nutritious; also, where the tissues of the body are flaccid, the living power is depressed, and the circulation sluggish, whether arising from cold, damp, over-exertion, fever, or any exhausting malady or circumstance. It is, however, a sacred duty to buy good and proper food, in preference to that which is not sufficiently nutritious, to be supplemented by fermented liquors.

Good beer and wine, particularly the former, are sometimes magic restoratives in extreme nervous excitation and want of sleep, attended with anœmia and general debility. In some of these cases, the pupils of the eyes are dilated, and the whole surface of the body is pale and damp. In others, the pupils are contracted, and the face is flushed. In either state the pulse is unusually rapid. But whether the face be pale or flushed in exhaustion of vital power, stimulants, as wine, beer, or spirit-and-water, must be freely given, in addition to other nutriment. The living power and the nervous energy must be sustained; without which all the manifestations of life go wrong, or soon ter-

minate. Spiritous stimulants, in cases of exhaustion, not only soothe and keep the nerves alive, but serve as elements of respiration, and thus help to prevent life ebbing out before proper ordinary food can be taken.

In exhaustion consequent upon childbirth, wine or brandy, or both, given freely, are sometimes imperative, in order to save life or prevent mania. And in some puerperal cases, good ale or stout is requisite from the first day of delivery, beside animal food, in order to prevent fever of debility, and give the mother a chance of wet-nursing her baby. Waiting a certain number of days before giving meat and stimulants is the way to commit mischief. It must depend upon circumstances.

And in many cases of debility, with febrile congestion of some of the abdominal viscera, attended with tenderness and pain, and a general feeling of distress, a liberal supply of wine, good ale, or stout, proves an essential remedy, bringing comparative ease and comfort in half-an-hour.

Of course the direction of stimulants for invalids belongs to the medical attendant. Mental excitement, with corporeal irritative action and congestion of exhaustion, must not be confounded with the mental excitement connected with sthenic action and sanguineous plethora.

Good draught beer is, in general, preferable to

bottled; and it should be had direct from the brewer or his stores, to give the patient the best chance of recovery. In cases of spasms, acidity, and debility of the stomach in the decline of life, spirit and water is preferable to wine or beer.

To take ardent spirits, or any kind of fermented liquor to excess, is one of the abominations of this earth. It causes disease of the blood, brain, nerves, heart, lungs, stomach, liver, kidneys, bladder, and every tissue and secretion of the body, ending in dropsy and premature, if not sudden, death.

Alas! bodily suffering from strong drink is not the main evil. Instead of an understanding heart, wisdom, proper energy, affection, faithfulness, peace, joy, a soothing voice, a comfortable home, and good food, there is loss or disturbance of intellect, volition, memory, and sensation; poverty, wretchedness, swearing, blasphemy, falsehood, robbery, anger, malice, and all manner of violence, vice, and crime, even to torture and bloodshed. The allotted work in the Lord's vineyard is left undone, and heed is not given to the solemn truth, that "As a man soweth now, that shall he also reap in eternity."

TOBACCO-SMOKING.

We cannot rightly go beyond the chapter embracing drink without a few words upon smoking.

It is said that tobacco-smoking is a vice leading to other vices; that it leads to the abuse of fermented liquors, and to drunkenness; that it takes money which is wanted for just debts and family requirements and comforts at home; and that it is a waste of time that might be profitably employed.

But tobacco-smoking is injurious in itself. Tobacco contains three powerful poisons—"Nicotin, a crystallizable salt; Nicotianin, a camphoraceous oil; and an empyreumatic oil." These poisons are considerably destroyed by heat, and the process of preparing the plant for smoking, snuff, and chewing; but much still remains.

The poisonous effects of tobacco are very striking in those first beginning to smoke. We well remember a youth making his first smoking essay. Soon after he began a cigar he staggered to a tree in the garden, laid hold of a lower bough with both hands, and there lodged his head. He was very pallid; a cold sweat came over his temples; he complained of feeling powerless, a continued nausea, numbness of the scalp, dimness of sight, and discomfort of the bowels. This was enough tobacco fume for him; he has never since wasted

his money and time in smoking; and such a resolution has proved to him a great advantage.

If these symptoms do not happen to those who are accustomed to smoke, others more durable, and consequently worse, sometimes do, separately or conjointly, viz., nervousness, want of muscular steadiness, bad appetite, indigestion, headache, palpitation, diarrhœa, and emaciation.

A notable effect of a cigar, however, did happen one day recently to an old smoker. After some puffs of the cigar, which at the time appeared unusually potent, he fell apparently lifeless on the floor, except a "gurgling in the throat." The nearest doctor was sent for, but before he arrived the patient had rallied.

Some persons smoke after breakfast, to promote intestinal evacuation; but still, are they not substantially injured by the tobacco if it has this effect? and would not the habit of daily giving the bowels a chance of natural relief regularly at one hour, and other means, do better?

Some say, "I am nervous; I must smoke; it soothes my nerves." But is not the nervous system first enervated by the tobacco, and then a little more is required to give a momentary steadiness to the trembling hand and faltering voice? Is it not the same with delirium tremens from spiritous liquors?

Many young men, and even children of ten and twelve years of age, commence the habit of smoking under the idea that it is "nobby," manly, or useful. Is it not more "nobby," manly, and far better, not to smoke, but to promote the healthy development of the frame by attention to the laws of God.

EXCRETION.

Excretion is the removal from the living economy of materials that have served their purpose; and which, if not removed as designed, become injurious.

Excretion varies with the individual's constitution, occupation, and habits, and the condition of the atmosphere. If increased from one source, it is diminished in another; for example, increased transpiration of the skin and lungs, from exertion or a high temperature, diminishes that of the kidneys and bowels; and, *vice versâ*, a check to the transpiration of the skin increases that of the bowels and kidneys. If it were not so, we should soon have exhaustion in the one case, and excrementitious plethora, or some serious disease, in the other.

When speaking of temperature, we alluded to the office of the skin, and now have a few remarks to make upon the excretion of the intestines and kidneys.

Food, when digested by the stomach, passes out of that organ into the duodenum, the first division of intestines, there to receive and mix with the bile and pancreatic juice. Thus the nutriment called chyle is formed. This is then conveyed into the system, chiefly by the blood-vessels and lacteals of the jejunum and ilium, the two next divisions.

Whilst, therefore, care is taken that no effete or innutritious material be too long retained in the intestines, the fresh nutriment must not be swept away by purgatives, before having time to be absorbed; lest we starve in the midst of plenty.

Some persons are very fond of purgatives; and not being aware how they thus irritate the entire alimentary canal, drain themselves of their blood and new materials for blood, and create a fever of exhaustion, are apt to continue them under the illusive idea of getting rid of the fever so generated, when, in reality, their continuance is the way to drop the curtain and close the scene.

The intestinal evacuations require regulating

according to the vigour of the constitution, vascular plenitude, the quantity and quality of food taken, and the amount of outgoing elsewhere. In general the bowels should be habituated to act once a day, at a given time. Regularity of meals, moderation in proper food, exercise, shampooing or friction over the abdomen, and avoiding tight dress so as not to check the natural expulsive power of the abdominal and respiratory muscles, much contribute towards this end. Restraining and delaying the natural action of the bowels is to encourage accumulation and constipation. When effete materials are allowed to accumulate contrary to design, they become partly re-absorbed, deteriorate the blood, and escape by other channels, as, the skin, lungs, and kidneys, causing fœtor of the breath and of the perspiration, cutaneous and other complaints.

When aperient medicines are only wanted to aid the regular action of the bowels, they ought to be mild; but in sanguineous plethora, high fever, recent colds, and check to the action of the skin and other secretions, they require to be more active, and partly of a saline nature. When there is no fever or plethora, some of the following will commonly answer: viz., magnesia and rhubarb, castor-oil, pills of henbane, and compound extract of colocynth, or the compound rhubarb or

dilute aloetic pill. If there is debility with tender bowels, something milder is necessary, as extract of henbane with camphor, henbane with extract of rhubarb, infusion of rhubarb and calombo or sambul, or some tonic infusion with tartarized soda or sulphate of potass, together with some warm embrocation or counter-irritant. When, however, the bowels are tender, the medical attendant should be consulted.

Very often, mild aperients containing extract of henbane or conium, or lettuce, act more readily and more comfortably than stronger medicines; because the latter, by irritating too much, induce spasmodic contraction of some of the muscular fibres of the intestines, and thereby cause them to retain instead of propelling their contents.

Remember, that if languor, drowsiness, and dilated pupils, or nervous excitation, with a red or pale face, heat or discomfort about the head, a quick and weak, or bounding or irregular pulse, follow purgatives, a generous diet is the thing most needful. Repeated purgatives in such cases are injurious.

The KIDNEYS very commonly have not sufficient attention. They are designed to remove surplus fluid and useless organic and inorganic materials that are not eliminated by other channels; and there is no other organ thoroughly adapted to do

their work; although the skin, lungs, and bowels may partially take up a vicarious action.

When the kidneys are diseased, and their function defective, materials that ought to pass off by them may be retained, and induce serious and complicated maladies; or, what ought to remain as nutriment, may escape, and lead to more or less exhaustion. A healthy condition of the kidneys, to regulate the pressure of fluid within the vessels of the frame, is particularly wanted, when the action of the skin is checked by cold, or the functions of the lungs and skin are rendered less active than is natural, by an over-damp atmosphere.

Fresh healthy urine is transparent, of a straw colour varying in shade, and of an acid reaction. It has a light flocculent cloud of mucus on cooling, but no bad smell. The cloud gradually subsides and becomes more apparent. When the quantity of urine is diminished by the effect of hot air or exertion on the skin, it is of a darker colour. And in this respect it varies with the food. After some time there is an unpleasant odour from decomposition, and the consequent formation of carbonate of ammonia, &c.; and, now, the test-paper indicates it to be alkaline instead of acid.

The urine on cooling may be turbid, and deposit

a sediment, without the existence of any disease of the kidneys or bladder. It may be the result of imperfect function elsewhere: viz., of the skin, liver, and lungs, or digestion and assimilation. If the kidneys, in health, had not the power of throwing off some constituents of food imperfectly digested or not assimilated, and, for a time and to a certain extent, in case of need, acting a vicarious part, embarrassment and disease would take place sooner, and to a greater extent.

If the urine is habitually turbid or offensive when passed, and there is, at the same time, pain or uneasiness in the loins or in the region of the bladder and in the thighs, some disease of one or both of these organs may be going on. Advice, therefore, should be had without delay.

When the urine continues excessively copious and pale, or very scanty and high-coloured, an opinion is also advisable. In the one case there is debility, which may increase and lead to other mischief without attention; and in the other, there may be febrile, inflammatory, or diseased action.

A dull pain in the loins from an affection of the kidneys is sometimes thought to be only rheumatism, and therefore allowed to go on without due attention. Dropsy is generally attended with scanty urine, and very often dependent upon disease of the kidneys.

MEDICAL AID.

A large proportion of the public do fully appreciate the services of the medical world, and it is impossible for any body to tell the amount of disease that is prevented and subdued, through God's blessing, by the timely energy and skill of that hard-working and self-denying class of men. But a vast number of persons allow maladies, that in all probability might be soon arrested, to make serious progress, either by a total neglect of remedial means, or by tampering with medicines without due knowledge of cause and effect: using stimulants and astringents, instead of laxatives and a mild diet; and laxatives and a low diet, instead of sustaining agents.

Every business requires its legitimate study, especially the healing art. To expect success to accompany efforts to prevent and subdue disease, the human economy must be well understood both in health and sickness. Medical study embraces many branches of science, and the medical man has been compared to a walking Encyclopædia. The medical attendant is, as it were, from his knowledge of anatomy and physiology, and from observation, able to have his eye within the

frame, scanning all there, whilst it is without, surveying there.

The main points which are binding upon the attention, in the treatment of disease, are: the amount of living power, and the necessity of sustaining it; the nervous control, and any undue nervous excitation; the strength of vascular action, and the amount of vascular fulness, whether above or below the design; diseased action quickly galloping forward or slowly stealing on; the condition of secretion and excretion, whether increased, diminished, or bad; the state of the blood itself; ultimate soundness of structure, as well as present relief from pain; and not one cause, but all the co-operating causes of the malady. Who can judge of these things but the men who have made them their special study?

The following cases exemplify a few common errors:

A, having loss of appetite, a sense of languor, general uneasiness and oppression, arising from an unhealthy condition of some organ, together with defective secretion, and consequent error in the blood, takes, instead of a mild diet and suittable correctives, fermented liquors and something "tasty," until there is an attack of fever or inflammation.

B, has an attack of diarrhœa (an effort to throw

off some materies morbi from the blood, or the result of offending materials in the intestines), and instead of first endeavouring to aid nature's effort of removal, and following that up with an astringent, takes the astringent first. The consequence is, an arrest and then a sudden return of the diarrhœa; or, increased febrile or inflammatory action.

C, having but little appetite, and feeling languid, nervous, discomfort at the pit of the stomach, and general uneasiness, takes a purgative, and being no better, takes 1, 2, or 3 more, and a low diet. The pulse now becomes quick and weak, or irregular, or bounding, and the face flushed or alternately flushed and pale. There is also distress in the head, with a sensation of singing, bell-ringing, or other sounds in the ears, and palpitation. This case from the first was only one of debility and error of secretion, requiring good air, mild correctives, and sustaining measures. The aggravated symptoms are only the struggles of increased nervous sensibility, very commonly attendant upon anœmia and exhaustion. To continue lowering in such a case, is only to bring on delirium and other sad results. Symptoms must be taken collectively, and power kept up.

D feels languid and spiritless, and a general discomfort; has a bad appetite, tenderness about

the pit of the stomach and bowels, and sometimes sharp pain in the bowels, which are much more constipated than usual; there is a puffiness and feeling of numbness about the parietes of the abdomen, and a dull pain in the back. The urine is scanty and turbid. These symptoms are allowed to go on for a long time without medical advice, until cold and damp weather sets in, and converts the case into a sharp attack of gastric fever.

E, a tall, robust, active person, from atmospheric and perhaps other causes, feels chilly, languid, dispirited, headachy, uneasy about the stomach and entire abdomen; the appetite is bad, the bowels are sometimes on the "fret" and sometimes confined; the urine is scanty and turbid, and the nights are not good. Brandy or gin-and-water is taken to "comfort," and a family pill; but no doctor consulted. These symptoms subside in eight or ten days; but E does not recover her strength and activity. In the course of some weeks, a catarrhal cold comes on, with the former symptoms aggravated. Yet the medical adviser is not consulted until the abdomen is observed to continue more swollen than usual; and there is considerable emaciation, sudden sharp pain in the bowels, and a tenderness over the whole abdomen, indicating inflammatory action, and threat-

ening to go on to effusion, or something of a serious nature.

F, always fond of "good living," has a dull pain in the back, with a more sluggish action of the kidneys than usual; the pain is thought to be "common lumbago," and of no consequence; therefore, medical advice is deferred. Time rolls on, and loss of appetite, discomfort at the pit of the stomach, want of power, a sense of general oppression, embarrassment in the respiration on exertion or mounting stairs, become superadded. Advice is now obtained, but there is found to be disease of the kidneys and heart, with water in the chest.

G, the subject of plethora, obesity, and gout, continues excesses in diet, which brought him into that state. This, together with inattention to excretion and "colds," makes him, as must always be expected, an early and veritable object of disease and dropsy.

Colds, unless urgent from the onset, are neglected under the idea that "it is only a cold, and will soon go off." Many do subside without more than ordinary care; but very many do not, without leaving some flaw. Colds, besides muscular or rheumatic pains, and an inflammatory or congestive state of the air passages, are very commonly attended with congestion and error of

secretion of some of the organs of the abdomen, and, if not attended to, often go on to fever of a grave character, or inflammation. In fact, all in influenza colds are fevers of a more or less intermittent, remittent, or continued type.

Colds if not totally neglected, are too long trifled with by ipecacuan, squill, and, and opium or other lozenges, instead of being promptly met by diffusible stimulants, diaphoretics, salines, aperients, counter-irritants, baths, and a mild unirritating diet, followed by tonics and correctives, as the case may be.

Mercury in some form, as calomel, blue pill, and grey powder, is extensively taken without advice. The assigned reasons are, "to make the liver act," "to get rid of the bile; "I have a pain in my right side, in my liver, in my right shoulder." Frequently, when the pain or discomfort is muscular, or from irritation in the colon or stomach, it is thought to be liver. And there is a very general idea that a defective action of the liver requires mercury; but it is not so. In some cases the liver readily responds to taraxacum, sarsaparilla, potass, and conium, but is rendered more torpid by mercury. As a rule, it ought first to be ascertained if it is a liver case to be driven by a mercurial spur, or aided by food and tonics, or other correctives; and, if the inactivity of the

liver has been of long standing, and connected with en largement of that organ.

The liver may not act well from many things which cause a want or interruption of nervous energy; as, debility, anxiety, grief, fear, anger, malaria, cold, damp, inactivity, want of sleep, pain or irritation in another part of the body. In such cases the depressing effect of mercury will make matters worse. Bad food, want of cleanliness, excesses in diet are other causes. In all and each case, first attempt to remove the cause.

Mercurial preparations are valuable agents in the hands of educated medical men; but when injudiciously taken, they depress the nervous energy, however low before; and induce a variety of nervous feelings, salivation, fœtor of breath, absorption of the gums and sockets of the teeth, disease of the bone, eruptions, and a kind of erysipelas of the mouth, throat, and stomach. Moreover, they render the skin, air passages, and whole frame, more susceptible of injury from cold; and frequently occasion the necessity of a respirator. Pills obtained as antibilous too often contain mercury.

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